SUP'AIR

Altirando² RS

User's manual

English version

SUPAIR-VLD
PARC ALTAÏS
34 RUE ADRASTÉE
74650 ANNECY CHAVANOD
FRANCE

45°54.024'N / 06°04.725' E

RCS 387956790

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Thank you for your choice of a ALTIRANDO2. We are proud to join you on your journey in our common passion : paragliding.

SUP'AIR has been designing, producing and selling accessories for free flying activities since 1984. By choosing a SUP'AIR product you benefit from almost thirty years of expertise, innovation and listening. This is also our philosophy : working endlessly to develop better products and to maintain a high quality production in Europe.

We trust that you will find this user's manual comprehensive, explicit and hopefully pleasant to read. We advise you to read it carefully !

On our website www.supair.com, you will find the last up to date information about this product. If you have any further questions, feel free to ask one of our retailers. And of course, the entire SUP'AIR team are at your disposal through info@supair.com

We wish you many safe flying and enjoyable hours, and happy landings

The SUP'AIR team

SUP'AIR Altirando² RS

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Pictures credits : Philippe Vernerey, SUP'AIR

Welcome to the travel, hikking and paragliding world !
With the Altirando2 you are equipped with a light but complete product enabling you to widen any mountain flying experience due to great comfort, a full Air-Bag protection and a reserve parachute container beneath the seat. It is the perfect harness to thermal up anywhere in the world...

After reading this manual, we suggest you check your harness by hanging in it before flying.

N.B : Three important icons will help you when reading this manual

Advice

Caution !

Danger !!

Technical sheet

A Back height (cm)

B Leaning setting height (cm)

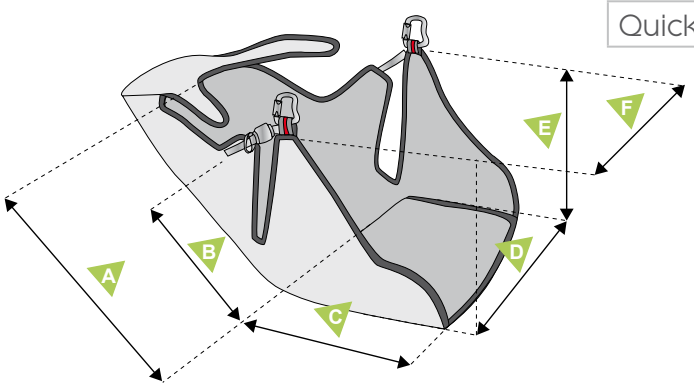
C Seat length (cm)

D Seat width (cm)

E Carabiners height (cm)

F Carabiners distance (cm)

Pilot size	XS 150-165 cm	S 155-170 cm	M 165-180 cm	L 175-195 cm	XL 195-205 cm
Pilot's weight	45-60 kg	50-70 kg	60-85 kg	70-95 kg	80-110 kg
Harness weight (+ carabiners+speedbar)	3850 g	3900 g	3960 g	4150 g	4260 g
Designed for	Paragliding only				
Back height (cm)	60	64	68	72	75
Leaning setting height (cm)	37	38	38	39	40
Seat length (cm)	45	47	48	49	51
Seat width (cm)	31	33	35	37	39
Carabiners height (cm)	44	44	44	44	44
Carabiners distance (cm)	39-53	39-53	39-53	39-53	39-53
Impact damping system : Airbag (Volume)	Yes				
Impact damping system : Bumpair (Thickness)	No				
Homologation	EN 1651 - LTF				
Flight : tandem (Pilot- Passenger)	possible				
Flight : acrobatic flying	No				
Take-off : Winching	Yes				
Quick-out carabiners compatibility	Yes				



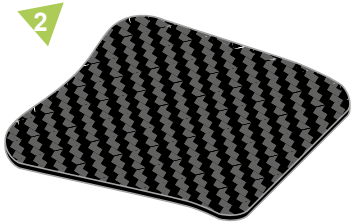
This harness is delivered with two 30 mm Biners (138 g. for the set). An overall weight decrease is possible to obtain by swapping the Biners with a «Connect» set (24 g. for the set).

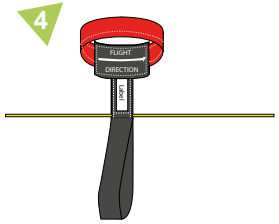
Choosing your harness' size is important. You will find here below a height/weight table that will help you in your size choice. Nonetheless we advise you to try out the harness under a hanging device and in different sizes at one of our retailers in order to choose the correct size.
For a complete list of our retailers, please click here : www.supair.com

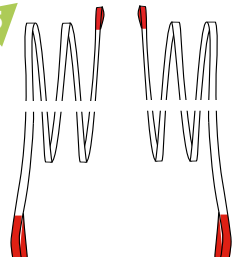
	1m45	1m50	1m55	1m60	1m65	1m70	1m75	1m80	1m85	1m90	1m95	2m	2m05
45 kg		XS	XS	XS									
50 kg		XS	XS										
55 kg		XS			S	S							
60 kg				S	S								
65 kg			S	S			M	M					
70 kg			S			M	M	M					
75 kg					M	M	M			L	L		
80 kg					M	M			L	L	L		
85 kg						M		L	L	L			
90 kg								L	L			XL	XL
95 kg								L			XL	XL	XL
100 kg										XL	XL	XL	XL
105 kg										XL	XL	XL	XL
110													

XS
XS/S
S
S/M
M
M/L
L
L/ XL
XL

1. Rescue parachute handle
2. Rescue parachute risers
3. 30 mm Aluminium self-locking biner
4. Reserve parachute handle (AX2-R)
5. Dyneema risers
6. Maillon Rapide ® Inox 6mm (x2)
7. O-Rings (x2)





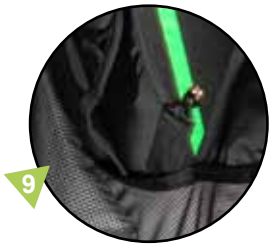


Option

8. Double stage speed-bar
9. Foot rest retractable

Harness overview

This illustration will help you during your reading.



1. Automatic ventral buckle
2. Safe-T-bar (Sup'Air patent A1-1832/981)
3. Automatic thigh strap buckle
4. Ventral width adjustment
5. Leaning setting
6. Shoulders'straps adjustment
7. Dorsal Air-Bag with storage compartment.
8. Buckles for foot-rest
9. Speed system pulleys.
10. Hiking poles hooking points.
11. Hydration hose passage.
12. Air-Bag locking system
13. Reserve parachute handle (AX2-R)

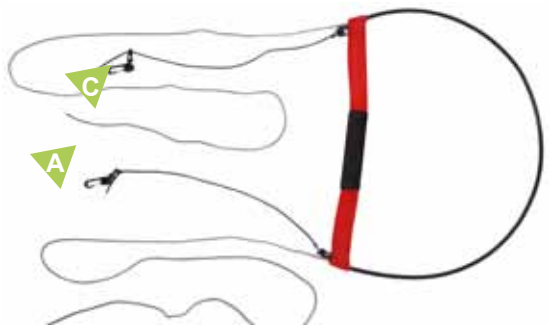
Backpack mode overall view.

1. Compression straps.
2. Elastic hiking pole lanyards.
3. Stretchable netted side pockets.
4. Adjustable load distribution straps.
5. Chest strap.
6. Hand-rest straps.
7. Adjustable waist strap.
8. Adjustable chest straps.
9. Waist strap pocket.
10. Lite pack

Installing the seat plate

Speed-Bar ready (Optional).

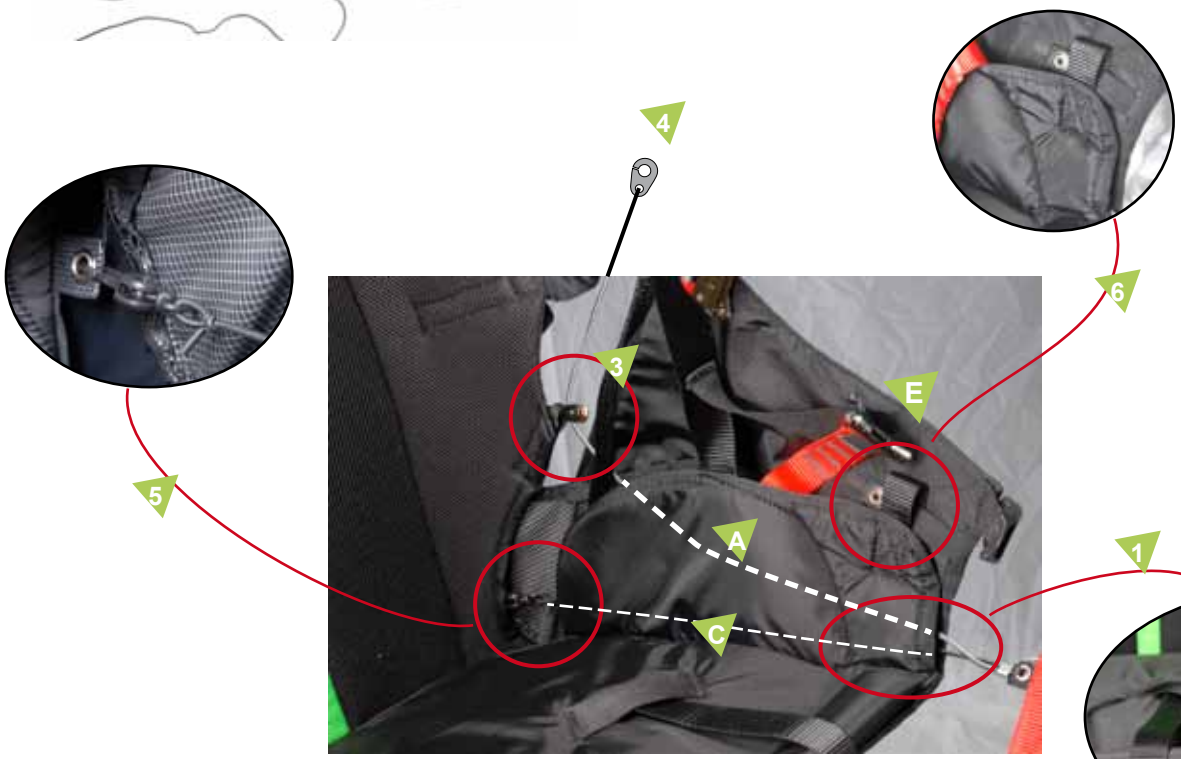
The Altirando RS is pre-equipped to receive most speed-bar systems found on today's market. Within the SUP'AIR accelerator product range, the double stage speed system is best suited for being light and self-retractable.



A Line.

B Locking hook.

C Elastic self-retractable speed-system.



Harness seating area inner view.

1 Push the speed-bar line through the the D ring. D

2 Push the speed-bar line between the outer webbing side and the harness skirt.

3 Push the speed-bar line through the pulley.

4 Attach the end of the speed-bar line to the crimped hook which is to be connected to the riser's crimped hook. Adjust the line length and securely knot it.

5 Self-retracting speed-system: push the elastic cords through the D ring to connect them to the metal grommets stitched on the inner sides of the harness.

6 Push through and close the harness side skirt holding strap into the seat guide.

Foot-rest installation.

The Altirando2 is pre-equipped to accept a retractable foot-rest (A).

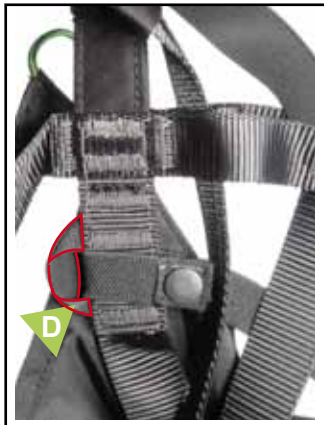
1

Push the foot-rest strap through buckle (B) located at the front of the harness's side skirt.

2

Push the elastic under the guide (C).

3



Wrap and connect the elastic around the main strap while pushing it through buckle (D).

4

Adjust the foot-rest length during a hang-test and stow away the straps excess in the elasticated holder.

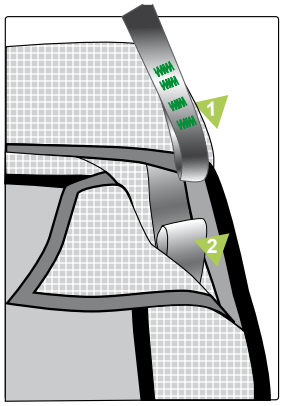
Rescue parachute setup assembly.

Thank you for comprehensively reading the following ! We will recommend you to have your reserve parachute initially installed by someone competent and familiar with the procedure.

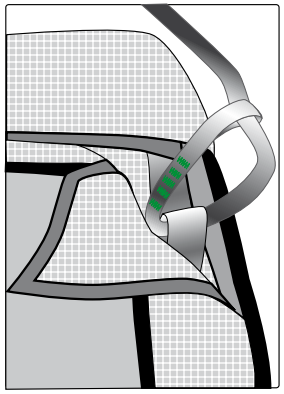
Connecting the risers to the harness

1. Rescue parachute Dyneema or standard risers

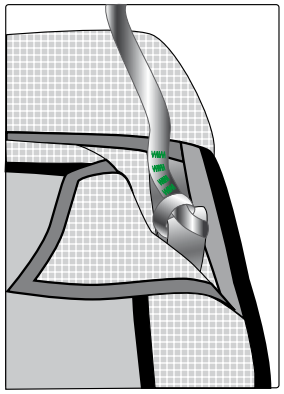
2. Webbing loop for rescue risers attachment



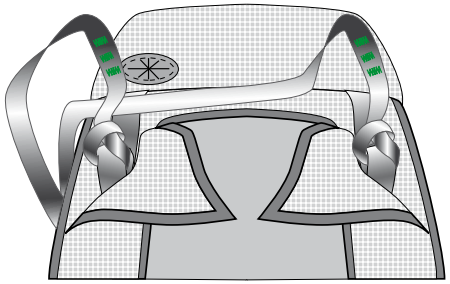
1. Make a lark's head between the risers and the webbing loop for rescue attachment.

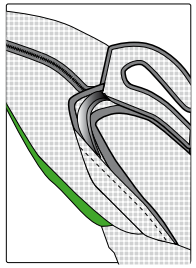


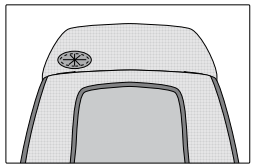
2. Fasten the lark's head neatly



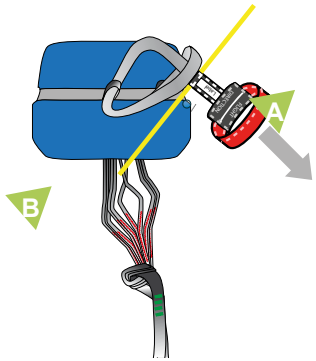
3. Neatly stow any surplus risers under the flaps.

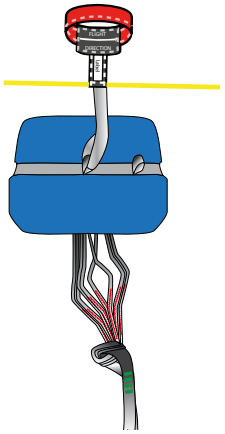






Connecting the handle to the rescue parachute's deployment bag



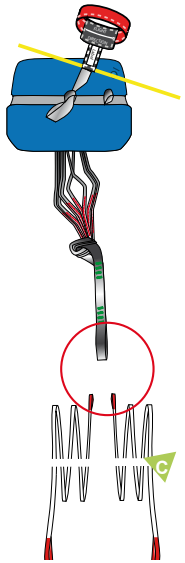


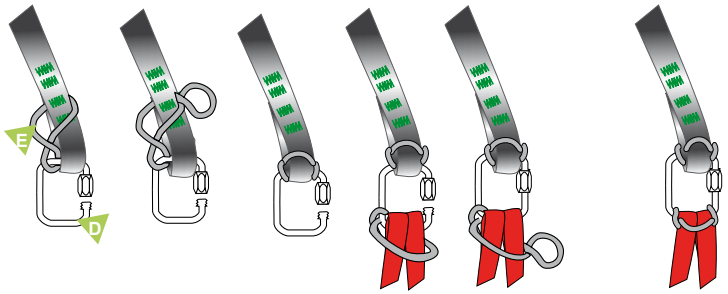
1. Place the handle inside the middle webbing loop and make a lark's head knot with the handle.

2. Fasten tightly the lark's head knot and verify the solidity of the link.

The handle must be connected to the central loop, except for large reserve parachute (use side loop). Must be checked at the end of the installation procedure by gently pulling on the handle and make certain to disengage both safety loops held in place by the cable.

Connecting the rescue to the Dyneema risers





- A — Altirando2 RS rescue parachute handle
- B — Parachute folded according to manufacturers specification and in deployment bag.
- C — Dyneema risers
- D — Maillon Rapide ® Inox 6mm (x2)
- E — O-Rings (x2)

Adjustable reserve parachute pocket.

The reserve parachute pocket volume is variable in size.You first must adjust its volume according to that of your reserve parachute.

The inner flap can have two positions

With the inner flap setting positioned atop the velcro at the pocket center : the volume is reduced and will accept the reserve parachute X-Light.

With the furthest pocket inner flap setting : the reserve parachute pocket offers maximum capacity to accept standard solo parachutes.

Reserve parachute installation in the pocket.

1

1 / Insert the reserve parachute inside the harness parachute pocket by opening all the flaps. The POD must be positioned with the handle at the top with risers and lines at the bottom. Push the risers through the guiding sleeves (the risers must be located behind the parachute).

2

Push a piece of cord through the line loop #1

3

Push the cord through the grommets 2 and 3 and pull it to force the line loop through the grommets.

4

Push the handle's yellow cable (front section) through line loop #1. Then delicately remove the cord from the underside of the loop.

5

Stow away the yellow cable's end piece in its protective sleeve.

6

Push the end of the cord through the elasticated loop #4, then guide it through the grommets #5 and #6

7

Pull the cord to guide the elasticated line through the grommets.

8

Push the handle's yellow cable (rear section) through the elasticated line and delicately remove the cord.

9

Close the Cordura flaps over the cable and push them through to the pocket's top lid .

10

Fold the Cordura flap over the handle and insert it underneath the handle's flap to fasten it to the velcros.

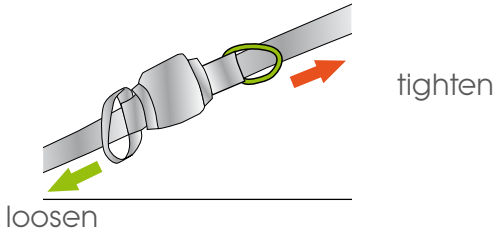
Upon setup completion, conduct an extraction sequence during a hang-test to verify that all works properly before duplicating the installation procedure again...

All harness adjustments must be made prior the first flight during a hang-test session. It is of utmost importance to adopt a proper flying posture, check all basic adjustments and have easy access to in-flight adjustments.

1. Chest strap finger-loop tension tightening adjustment.
2. Chest strap finger-loop tension release adjustment.
3. Tightening snapper (leaning setting)
4. Loosening strap (leaning setting)
5. Tightening snapper (shoulder strap)
6. Loosening strap (shoulder strap)

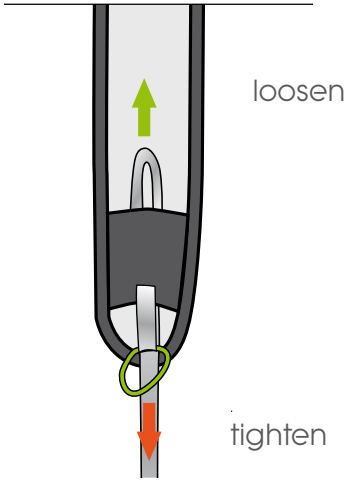
A Leaning angle setting

Set the angle of leaning by tightening the snapper (towards a more vertical position) or the black webbing (towards a more horizontal position). You can extend the lumbar support by tightening the #5 buckle.



B Shoulders' straps adjustments.

Tighten the shoulder straps by pulling the finger loop down. Pull up to release. The shoulder straps support, greatly helps the comfort level. It should be set precisely. You must find the correct tension between the side and shoulder straps adjustments. When adopting a reclined flying posture, the shoulder straps must enhance in-flight comfort levels by supporting the upper back.



C Chest strap adjustment.

This adjustment is important as it acts on the ABS and the harness overall stability. The tighter the more stable. The opposite is true while enabling weight-shift steering.

To tighten the chest strap:
Place your left hand in front of and pass the risers to grab the right self-locking Biner.
With the right hand, grab the chest strap finger-loop and pull it to tighten the chest strap.

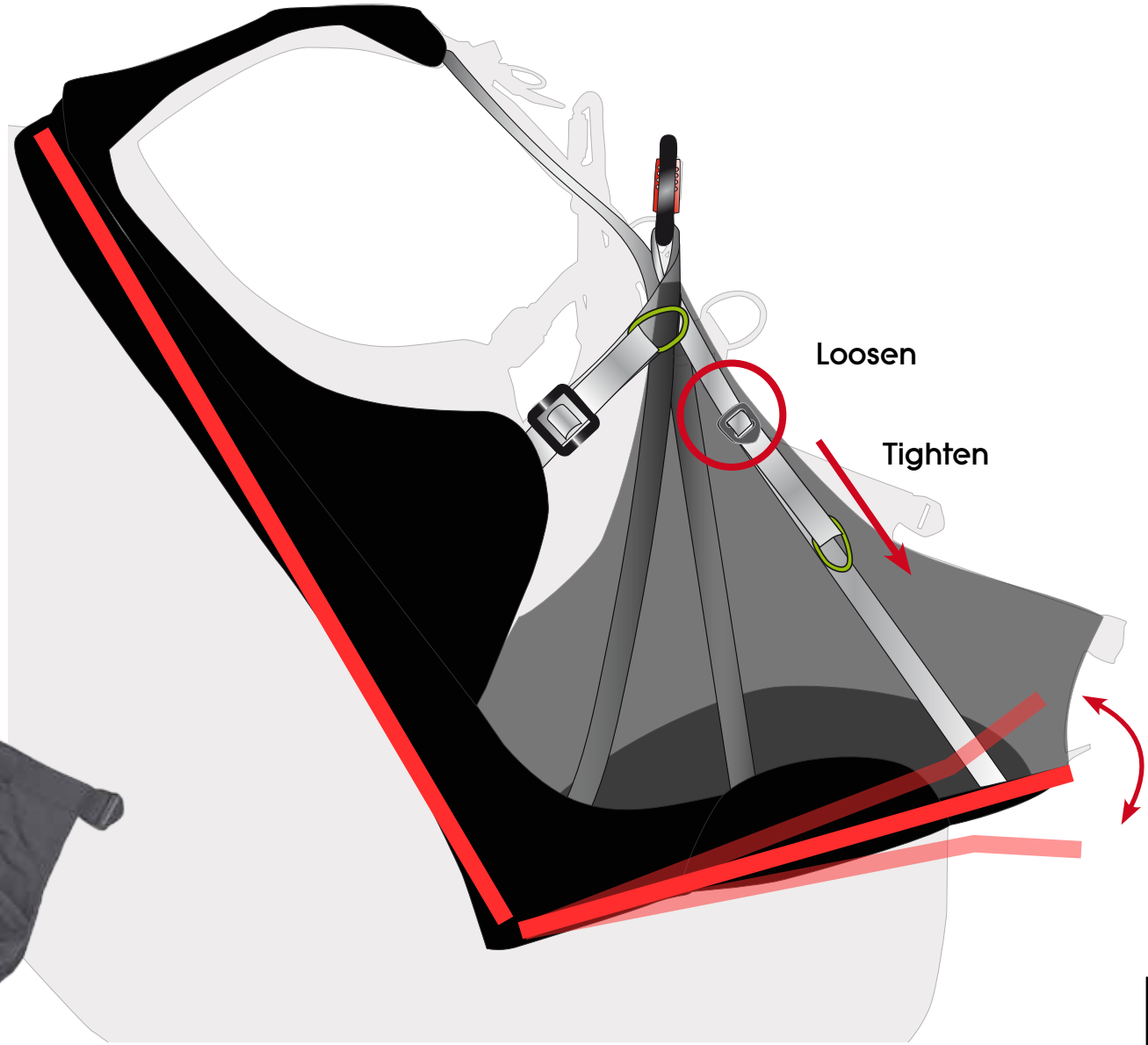
To loosen the chest strap:
Place your left hand in front of and pass the risers to grab the right self-locking Biner.
With the left arm, shorten the distance between the risers and pull the finger-loop in the opposite direction to loosen the chest strap.

Seat depth adjustment

Tighten >> upright seating posture :
pull up the seat plate front side, and increase the seat depth.

Loosen >> reclined seating posture : pull down the seat plate front side and reduce the seat depth. This gives the ideal posture to fly with a foot rest.

Symmectrical adjustment



How to turn the Altirando2 harness mode into the backpack mode:

1 / Completely open the Air-Bag.
2 / Flip the Air-Bag inside-out.
3 / Place the seat-plate vertically against the back wall - stow away your gear inside the newly made backpack.

How to turn the Altirando2 backpack mode into the harness mode:

1 / Completely loosen the backpack's upper weight distribution straps or the Air-Bag will be pinched at the its top section.
2 / Completely unzip the Air-Bag.
3 / Empty the backpack's content.
4 / Unfold the seat-pate toward the outside.
5 / Zip the Air-Bag and activate the pressure locking system located right onto the harness - designed to fully close the envelope and ensure its proper inflation.

The Altirando2 RS is a safe and sound harness. Its ABS (Anti Ballance System) is very efficient, especially due to high crossed connection points. The stiffened but yet flexible backrest, the well padded shoulder straps give an excellent comfort level during long XC flights. This harness broadens the hiking and flying possibilities while being perfectly suited to tackle any local site flying.

Conduct a thorough pre-flight check before each takeoff.

- Check the harness and Biners integrity.
- Check that the (optionnal) front parachute pocket is correctly closed.
- Check that your harness adjustments have not changed.
- Check the connexion risers / harness as well as the self-locking Biners (locked and secured).
- Check your speed-bar system if your harness is equipped with one.
- Make certain to close all buckles, pockets and especially the Air-Bag zipper with its locking mechanism.

After a thorough weather conditions analysis, when the decision to fly has been taken, fit into the harness :

- Fasten the buckles (thigh straps, safe-T-bar and ventral buckles) with application.
- Double check that all buckles are fully locked and secured by pulling firmly on them. Check that no line, tab or cloth is stuck / jammed in the buckles.

- Be absolutely certain that there is not a line or other object in contact with or caught in the reserve parachute handle.

1. Thigh strap automatic buckles
2. Safe-T-Bar® Sup'air patent A-1832/981
3. Chest strap automatic buckles

Takeoff is a simple and straight forward. The transition from running to seating is easy. If the transition is a bit more demanding then, raise your knees and push with your shoulders against the risers while wiggling your waist to help your body slide into the bottom of the seat. It is also possible when setting up, to tighten the leg straps slightly more to prevent them from riding up along your thighs while running.

Never forced yourself into the harness with your toggles in hands. Doing so, could slow the glider down and stall it.
Do not release your hands from the brakes when you are close to the ridge.

In flight

As soon as you are airborne, the behaviour is very instinctive and precise.

Please set the distance between the two carabiners according to the aerology and to the wing manufacturer's recommendations. The average distance / spacing for most gliders from the center of the right Biner to the center of the left Biner where the risers connect, is between 36 cm and 45 cm.

Tightening the chest strap provides more stability but less harness piloting efficiency. Doing so, increases the risk of riser twisting. On the contrary, loosening the strap provides more efficiency but can be dangerous in turbulent aerology while increasing the risk of falling towards the collapsed side of your glider and without being able to efficiently counteract the situation.

Speedbar use

We recommend a careful use of the speedbar because of an increased risk of massive collapse. Please read carefully the manual of your glider.

Landing

Stand up inside the harness and adopt an upright position in order to run to dissipate horizontal speed.

Do not land whilst in the seated position, this is dangerous.

NB : Frequents landings on the Airbag can damage the fabrics and the sewings and may decrease its efficience.

We propose you optional accessories that combine perfectly to your ALTIRANDO2 RS harness.

Function	Code	Description	Code
Speed bar	ACCELSOUPLE	Soft speed bar	100 g
	CALEPIEDRETRACT		150 g

All the information for the accessories are provided with the product or are easy to access on our website www.supair.com

Wash and care of your harness

It is a good idea to wash your harness from time to time. To do this, we recommend to use a soft solvent (such as soap), use a brush and rinse thoroughly. In any case, do not use chemicals such as detergents or strong solvent because it may deteriorate the webbing, stitching and fabrics of your harness.

The zip fasteners should be lubricated from time to time, using a silicon spray.

If your harness gets wet, it is advisable to treat your automatic buckles and carabiners with silicone grease from time to time.

Storage and transport

When you don't use your harness, store it inside your paragliding rucksack, in a dry, cool and clean place, protected from UVs exposure. If your harness is wet, please dry it thoroughly before storing.

For transport, protect the harness from any mechanical or UV deterioration (use a bag). Please avoid long transports in wet conditions.

Lifetime

Independently of the pre-flight check-out, you have to open and unfold your rescue parachute once every 6 months. Once every 2 years, you need to perform a complete check of your harness :

- Carbon seat plate : no crack, no asperity.
- webbings (no excessive wear, no rip beginning, no unwanted folds)
- buckles and carabiners (no structural cracks / works fine).

The threads that compose the webbing and fabrics used in the ALTIRANDO2 have been selected in order to ensure the best possible lightness/lifetime compromise. Nonetheless, in some conditions, after a long term exposure to UV and/or significant abrasion or exposure to chemicals, it is compulsory to check your harness in a certified repair centre. It is about your safety.

These carabiners must never be used for anything else else than paragliding (not for climbing, no towing, etc.).

The carabiners must be replaced by new ones every 5 years.

Repair

Though we use the highest quality materials, it is possible that your harness may eventually deteriorate through general use. If its is showing any signs of significant wear and tear, you should check it and repair it in an certified repair centre.

SUP'AIR offer a repair facility for their products beyond the end of the warranty period. Please contact us either by telephone or by E-mail sav@supair.com in order to receive a quotation.

Materials

Fabrics
DYNEEMA® RIPSTOP
CORDURA®

Webbings
Polyamide 20 mm (500DaN)
Polyester 25 mm (1250 DaN)

Recycling

All our materials are selected for their technical and environmental characteristics. No components of our harnesses may harm nature. Most of our components are recyclable.

If you judge your harness has finished its life, you can separate all the plastic and metallic parts and apply up-to-date sorting rules in effect in your community. For recycling of the fabric parts, we advise you to contact your local authority that deals with fabric recycling.

Environmental friendly practices

We highly recommend you to respect as much as possible our environment while practicing paragliding and especially : not to go outside tracks, do not make unwanted noise and do not disturb the mountain areas' balance. We advise you to do this starting from the take-off.

Disclaimer

Paragliding is an activity that requires, skill, specific knowledge and sound judgement. Be careful, learn in certified schools, subscribe an adequate insurance policy as well as a flying license and make sure your skill match the conditions. SUP'AIR cannot be held responsible for your paragliding decisions or activities

This SUP'AIR product has been designed exclusively for paragliding. Any other activity such as skydiving or BASE jumping is absolutely forbidden.

Pilot's gear

This is essential that you carry a helmet, suitable boots and clothing. Taking a reserve parachute suitable for your weight and correctly connected to your harness is also very important.

This page will help you to record all the life stages of your ALTIRANDO 2 harness.

Serial number :

Purchase date	
Owner's name	
Name and stamp of the shop	

☐ Care ☐ Resale	
date	
Workshop's name/ Buyer's name	

☐ Care ☐ Resale	
date	
Workshop's name/ Buyer's name	

☐ Care ☐ Resale	
date	
Workshop's name/ Buyer's name	

☐ Care ☐ Resale	
date	
Workshop's name/ Buyer's name	

SUP'AIR

Altirando² RS

User's manual

SUPAIR-VLD
PARC ALTAÏS
34 RUE ADRASTÉE
74650 ANNECY CHAVANOD
FRANCE

45°54.024'N / 06°04.725' E

RCS 387956790